

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Claims 1-111 (Canceled).

112 (Currently amended): A method of inducing an immune response to at least one antigen comprising

(a) applying a formulation to hydrated skin of an organism,
wherein the formulation comprises

- (i) at least one antigen which is derived from a pathogen and
- (ii) at least one adjuvant,

wherein an effective amount of the at least one antigen ~~which is not encapsulated by liposomes~~ induces the immune response to the at least one antigen in the organism.

113-114 (Cancelled).

115 (Previously presented): The method of claim 112, wherein the pathogen is selected from the group consisting of bacterium, virus, fungus and parasite.

116 (Previously presented): The method of claim 112, wherein the antigen is selected from the group consisting of carbohydrate, glycolipid, glycoprotein, lipid, lipoprotein, phospholipid, and polypeptide.

117 (Previously presented): The method of claim 112, wherein the pathogen is a live or an attenuated live virus and the antigen is expressed by the live or attenuated live virus.

118 (Currently amended): The method of claim 115, wherein the bacterium ~~bacteria~~ is anthrax.

119 (Previously presented): The method of claim 115, wherein the virus is rabies.

120 (Currently amended): The method of claim 112, wherein the at least one adjuvant is selected

from the group consisting of bacterial DNA, cytokines, chemokines and lipopolysaccharides.

121 (Currently amended): The method of claim 112, wherein the at least one adjuvant is an ADP-ribosylating exotoxin or toxoid thereof having adjuvant activity.

122 (Previously presented): The method of claim 121, wherein the ADP-ribosylating exotoxin or toxoid thereof is selected from the group consisting of pertussis toxin, a pertussis toxin toxoid having adjuvant activity, cholera toxin (CT), a CT toxoid having adjuvant activity, an *E. coli* heat-labile enterotoxin (LT), an LT toxoid having adjuvant activity, diphtheria toxin (DT), a DT toxoid having adjuvant activity, Pseudomonas exotoxin A, and a Pseudomonas exotoxin A toxoid having adjuvant activity.

123 (Currently amended): The method of claim 112, wherein the at least one adjuvant is ~~formulation comprises~~ an ADP-ribosylating exotoxin B subunit from cholera toxin (CT).

124 (Cancelled).

125 (Currently amended): The method of claim 112, wherein the at least one adjuvant is ~~formulation comprises an adjuvant~~ selected from the group consisting of an ADP-ribosylating exotoxin in which ADP-ribosyl transferase activity is inactivated; an ADP-ribosylating exotoxin chemically conjugated to a carbohydrate, polypeptide, glycolipid, or glycoprotein antigen; an ADP-ribosylating exotoxin subunit chemically conjugated to a carbohydrate, polypeptide, glycolipid, or glycoprotein antigen; and, an ADP-ribosylating toxoid chemically conjugated to a carbohydrate, polypeptide, glycolipid, or glycoprotein antigen.

126 (Previously presented): The method of claim 112, wherein the formulation is a cream or gel or emulsion or ointment or lotion or paste or solution or suspension.

127 -128 (Cancelled).

129 (Previously presented): The method of claim 112, wherein the formulation is applied with a patch.

130 (Previously presented): The method of claim 112, wherein the formulation further comprises a dressing.

131 (Previously presented): The method of claim 130, wherein the dressing is occlusive or non-occlusive.

132 -133 (Cancelled).

134 (Previously presented): The method of claim 120, wherein said cytokine is tumor necrosis factor alpha.

135 (New): A method of inducing an immune response to at least one antigen comprising applying a formulation to skin of an organism, said formulation comprising

- (i) at least one antigen derived from a pathogen; and,
- (ii) at least one adjuvant, wherein said formulation does not comprise transferosomes;

wherein said formulation is hydrated such that delivery of an effective amount of said antigen occurs, wherein said effective amount of said antigen induces said immune response.

136 (New): The method of claim 135, wherein said hydration is accomplished by application of a patch.

137 (New): The method of claim 135, wherein said formulation is a cream or gel or emulsion or ointment or lotion or paste or solution or suspension.

138 (New): The method of claim 135, wherein the pathogen is selected from the group consisting of bacterium, virus, fungus and parasite.

139 (New): The method of claim 135, wherein the antigen is selected from the group consisting of carbohydrate, glycolipid, glycoprotein, lipid, lipoprotein, phospholipid and polypeptide.

140 (New): The method of claim 135, wherein the pathogen is a live or an attenuated live virus and the antigen is expressed by the live or attenuated live virus.

141 (New): The method of claim 138, wherein the bacterium is anthrax.

142 (New): The method of claim 138, wherein the virus is rabies.

143 (New): The method of claim 135, wherein the at least one adjuvant is selected from the group consisting of bacterial DNA, cytokines, chemokines and lipopolysaccharides.

144 (New): The method of claim 135, wherein the at least one adjuvant is an ADP-ribosylating exotoxin or toxoid thereof having adjuvant activity.

145 (New): The method of claim 144, wherein the ADP-ribosylating exotoxin or toxoid thereof is selected from the group consisting of pertussis toxin, a pertussis toxin toxoid having adjuvant activity, cholera toxin (CT), a CT toxoid having adjuvant activity, an *E. coli* heat-labile enterotoxin (LT), an LT toxoid having adjuvant activity, diphtheria toxin (DT), a DT toxoid having adjuvant activity, Pseudomonas exotoxin A, and a Pseudomonas exotoxin A toxoid having adjuvant activity.

146 (New): The method of claim 135, wherein the at least one adjuvant is an ADP-ribosylating exotoxin B subunit from cholera toxin (CT).

147 (New): The method of claim 135, wherein the at least one adjuvant is selected from the group consisting of an ADP-ribosylating exotoxin in which ADP-ribosyl transferase activity is inactivated; an ADP-ribosylating exotoxin chemically conjugated to a carbohydrate, polypeptide, glycolipid, or glycoprotein antigen; an ADP-ribosylating exotoxin subunit chemically conjugated to a carbohydrate, polypeptide, glycolipid, or glycoprotein antigen; and, an ADP-ribosylating toxoid chemically conjugated to a carbohydrate, polypeptide, glycolipid, or glycoprotein antigen.

148 (New): The method of claim 143, wherein said cytokine is tumor necrosis factor alpha.

149 (New): The method of claim 112, wherein skin is hydrated by at least one method selected from the group consisting of:

- (a) application of a hydrating agent;
- (b) application of a patch;

- (c) application of a dressing;
- (d) application of a formulation wherein said formulation is a cream, emulsion, gel, lotion, ointment, paste, solution or suspension; and,
- (e) combinations of any of (a)-(d) above.